

ABSTRACT

BACKGROUND:

Periodontal infections like Chronic and Aggressive type of periodontitis were found to be associated with systemic diseases. Studies suggested that it might enhance the risk for certain systemic diseases. Like vice, some systemic conditions has its effect on the periodontal health. Diabetes mellitus tend to increase the risk for periodontal disease and vice versa. Recently many researchers suggested the link between chronic periodontitis and anemia. The association of chronic periodontitis with decreased red blood cell parameters suggested that this condition may be linked with Anemia of Chronic Disease. Very few studies explored the effect of Aggressive periodontitis on erythrocyte counts and hemoglobin levels. This is the first interventional study to investigate the hematological parameters in Generalized Aggressive Periodontitis patients and also evaluate the effect of Non-surgical periodontal therapy on blood parameters of Generalized Aggressive Periodontitis patients.

AIM AND OBJECTIVE:

The main aim of this study is to evaluate the systemic markers related to Anemia in Generalized aggressive periodontitis patients before and after phase I periodontal therapy.

MATERIAL AND METHODS

A total number of 30 young adults diagnosed with Generalised Aggressive Periodontitis were selected for the study and after obtaining sign in a written informed consent clinical parameters such as Plaque Index, Gingival bleeding index, Probing depth, Clinical attachment level and Blood parameters viz., RBC, Hb, PCV, MCV, MCH, MCHC, ESR and Serum Ferritin levels estimation were done. Based on the inclusion criteria 17 patients with serum ferritin level above 30ng/dl were enrolled in the study, of which two patients discontinued. Finally 15 patients were considered and subjected to

phase I periodontal therapy. At the end of three months clinical parameters and hematological parameters were re-evaluated. The obtained results were statistically analysed using paired *t*- test and Wilcoxon signed rank test.

RESULTS:

The Hematological parameters such as Hemoglobin and RBC count were found to be increased significantly after phase I therapy with a significant improvement in the Plaque Index score, Gingival bleeding index score, reduction of Probing depth and gain in Clinical attachment levels. The other blood parameters viz., PCV, MCV, MCH, MCHC values were minimally increased after phase I therapy but the difference was not found to be statistically significant in this study. The ESR value also significantly decreased post-operatively.

CONCLUSION:

Within the limitation of this present interventional study it could be concluded that Generalized Aggressive Periodontitis was associated with reduced Red blood cell parameters suggesting that it may tend toward anemia of chronic disease. The treatment by Non-surgical periodontal therapy not only reverses the periodontal health by reducing the inflammation but also improves the anemic status.